

DEMANor Cable Carousels

DEMANor located in Norway, has since 1994 been one of the world leading supplier of cable carousels and components for cable carousels. The DEMANor Cable Carousels are used for offshore cables, mainly umbilical for the oil industry, but also other subsea cables. The umbilical are used to control subsea installations from the "mother-ship".

Due to big cable diameter, up to 500 mm, long length and high weight, the cable has to be wound up on carousels instead of reels.

In addition to different types of cable carousels, DEMANor supplies hydraulic operated loading arms, to guide the cable down to the carousel. The loading arms are provided with caterpillars to push or pull the cable during loading or unloading of the cable carousel.

Customized design

The DEMANor Cable Carousels are customized to each customer's needs. To succeed in the work DEMANor has a close co-operation with the customers. Every manufacturing plant has its own demands, needs and limitations, which must be implemented into the design.

DEMANor's sales engineers works together with design engineers to make sure every design is customized in the most efficient way.

References

- **Duco Ltd** (Angoflex Ltda, Angola)
- **Aker Subsea Inc**, Mobile, Alabama USA
- **Aker Subsea as**, Moss, Norway
- **Nexans**, Norway
- **Draka Norsk Kabel**, Norway
- **Duco Inc**, Huston USA



FAT at DEMANor



The operator's cabin on a cable carousel at Draka Norsk Kabel, Norway



Cable
Carousels

Made by DEMANor



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Main supplier:



Certified by:



Member of:



Facts about DEMANor

- can offer competence and wide experience within material handling
- sole supplier for DEMAG in Norway
- worldwide supplier of cable carousels
- has a wide product range of components and complete systems
- solution oriented team of employees with high competence
- has an efficient and a competent organization

The Cable Carousel team at DEMANor



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Power Cable Carousel at Draka Norsk Kabel, Norway

Carousels for Power Cables and Umbilicals

DEMAnor mainly delivers two types of cable carousels, one for power cables and one for umbilicals.

Carousels for Power Cables is a type of carousel customized mainly for manufacturing of all types of power cables. DEMAnor has designed different solutions for cable carousels up to 12,000 tons.

Umbilical Carousels is customized mainly for manufacturing of all types of umbilicals. DEMAnor has supplied umbilical carousels with diameters up to 50 meters, and capacity of 4,200 tons.

Both carousels can easily be designed to meet any customer's requirements - for larger dimensions and capacities.

Construction

The carousels consist of sections, with similar number of wheels on each section, running on rail rings. The wheels are mounted with equal angular distance. All wheels are installed in galvanized steel cassettes, mounted with equal angular distance on each section. Inner part of sections is connected to a slewing bearing ring to keep the carousel in centre.

For umbilical carousels the inner bearing can be replaced with guide rollers at the outer rail. For concentric installations this *must* be done for the outer carousel. The drives are installed outside the carousel basket, driving the carousel via a pinion on the output gearbox shaft and a bolt ring on the carousel sections. For some umbilical carousels the drives are connected directly to the driven wheels at the outer rail, which gives easy access for service and maintenance.

The carousels can be divided in several compartments if needed.

In case of emergency

The motors are supplied with external cooling fans and are connected to frequency inverter(s). Motors are supplied with brakes to stop the carousel within a short time in case of an emergency stop.



Umbilical Carousel



Power Cable Carousel

The control cabinet

The control cabinet is placed "on shore" of the carousel, and all control signals are hardwired between the drive and the control cabinet.

For some umbilical carousels the control cabinet is placed on the carousel, and power supply and control signals are hardwired via bus bar lines. Warning signals and other relevant data are transmitted wireless to the operator's cabin.

The control signals are given from a joystick, pushbuttons and switches in the operator's cabin on the loading arm support. All control signals are transmitted via Profibus. In addition there are pushbuttons in the control cabinet door, to drive the carousel during service and maintenance, after activating a selective switch "Remote/Local" in the control cabinet door.



The operator's cabin is supplied with AC, heating and a slewing chair with consoles with all control equipment and touch display displaying all errors and other relevant data. A camera is installed at the loading arm end and a monitor is installed in the operator's cabin,

to monitor the drop-down point of the umbilical. This gives the operator a comfortable and safe working place.

The loading arm

All functions of the carousel and loading arm, is controlled from the operator's cabin, installed on the loading arm support. Normally the loading arm is hinged at the platform for the caterpillar, and moved sideways on the loading arm support, by a rope winch or a toothed rack and pinion. The end of the arm is hydraulically operated sideways and up/ down.

For the power cable carousels the loading arm is supported by a column, installed inside the slewing bearing in centre of the carousel.

On the umbilical carousel roller windows are supplied along the top of the arm. Top rollers can be turned 90 deg. sideways to open the roller windows to lift out the umbilical.